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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/772,303

02/06/2004

Masataka Sakata

030658-098

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02/09/2006

BUCHANAN INGERSOLL PC  
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EXAMINER

KAO, CHIH CHENG G

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,303

Applicant(s)

SAKATA, MASATAKA

Examiner

Chih-Cheng Glen Kao

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 1/20/06. These drawings are acceptable.

### *Claim Objections*

2. Claims 1 and 7-13 are objected to because of the following informalities, which appear to be minor draft errors including grammatical and/or lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following correction(s) may obviate the objection(s): (claim 1, line 7, "X- ray"; deleting the space between the hyphen and "ray"), (claim 1, line 11, "two- dimensional"; deleting the space between the hyphen and "dimensional"), (claim 7, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 8, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 9, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 10, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 11, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 12, line 2, "X- ray"; deleting the space between the hyphen and "ray"), (claim 13, line 3, "X-rays which emerges"; replacing "emerges" with - - emerge- -), and (claim 13, line 14, "two- dimensional"; deleting the space between the hyphen and "dimensional").

For purposes of examination, the claims have been treated as such. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a measuring step using a divergent beam comprising the step of causing X-rays emitted from an X-ray source to strike a specimen in a form of a divergent beam, fails to reasonably provide enablement for a measuring step using a divergent beam comprising the step of causing X-rays emitted from an X-ray source to strike a specimen in a form of a parallel beam. The specification fails to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Claim 13 recites a “method for analysis in which X-rays are emitted from an X-ray source to strike a specimen in a form of either a divergent beam or a parallel beam, ... said method having a measuring step using said divergent beam, said measuring step comprising the steps of: causing X-rays emitted from an X-ray source to strike a specimen in a form of either a divergent beam or a parallel beam”. The specification shows how a measuring step using a divergent beam includes a step of causing X-rays emitted from an X-ray source to strike a specimen in a form of a divergent beam (fig. 1). The specification also shows how a measuring step using a parallel beam includes a step of causing X-rays emitted from an X-ray source to strike a specimen in a form of a parallel beam (fig. 2). However, the specification fails to describe how a measuring step using a divergent beam includes a step of causing X-rays emitted

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from an X-ray source to strike a specimen in a form of a parallel beam. How can one have a measuring step using a divergent beam by emitting a parallel beam? Therefore, the claim is rejected for enablement issues.

For purposes of examination, the claim has been examined as best understood as follows.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Iwasaki et al. (JP 09-229879).

Iwasaki et al. discloses a method for X-ray analysis (abstract) in which X-rays are emitted from an X-ray source (fig. 1, #F) to strike a specimen (fig. 1, "S") in a form of either a divergent beam or a parallel beam (fig. 1, and abstract), and X-rays which emerge from said specimen (fig. 1, "S") are detected by a two-dimensional X-ray detecting means (fig. 1, #2), said method having a measuring step using said beam (fig. 1), said measuring step comprising the steps of: causing X-rays emitted from an X-ray source (fig. 1, "F") to strike a specimen (fig. 1, "S") in a form of either a divergent beam or a parallel beam (abstract), wherein in the case of using a divergent beam, said method further comprising steps of: shifting an angle of incidence of X-rays striking said specimen by rotating either said specimen or said X-ray source around a central axis of rotation running through a surface of the specimen; arranging a mask having a slit

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in front of said two-dimensional X-ray detecting means so as to make the slit to be located on a line intersecting a plane rectangularly intersecting said central axis of rotation and containing a central optical axis of incident X-rays; and moving said two-dimensional X-ray detecting means in parallel with said central axis of rotation in synchronism with the shift of the angle of incidence of X-rays relative to the specimen.

***Allowable Subject Matter***

5. Claims 1-12 contain allowable subject matter. The following is a statement of reasons for the indication of allowable subject matter.

Regarding claim 1, prior art fails to disclose or fairly suggest an apparatus for X-ray analysis including means for moving a two-dimensional X-ray detecting means in parallel with a central axis of rotation, and a mask arranged at a position in front of said two-dimensional X-ray detecting means as viewed from a specimen and having a slit on a line intersecting a plane rectangularly intersecting said central axis of rotation and containing a central optical axis of incident X-rays, in combination with all the limitations in the claim. Claims 2-12 contain allowable subject matter by virtue of their dependency.

***Response to Arguments***

6. Applicant's arguments with respect to claim 13 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments filed 1/20/06 have been fully considered but they are not persuasive.

Regarding claim 13, Applicant argues that Iwasaki et al. discloses a zero-dimensional X-ray detecting means. The Examiner disagrees. The surface of the detecting means (fig. 1, #2) must necessarily have two dimensions (i.e. one dimension shown in figure 1, and a second dimension along the plane going in and out of the paper). Therefore, Iwasaki et al. does disclose a two-dimensional X-ray detecting means.

In conclusion, Applicant's arguments are not persuasive, and the claim remains rejected.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

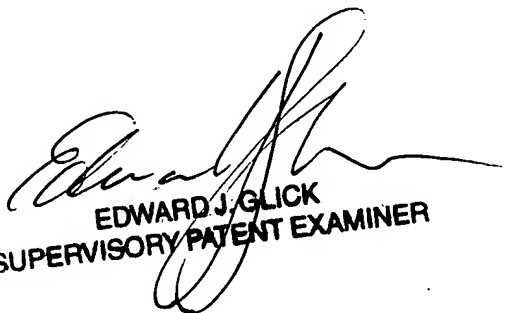
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gk



EDWARD J. GLICK  
SUPERVISORY PATENT EXAMINER



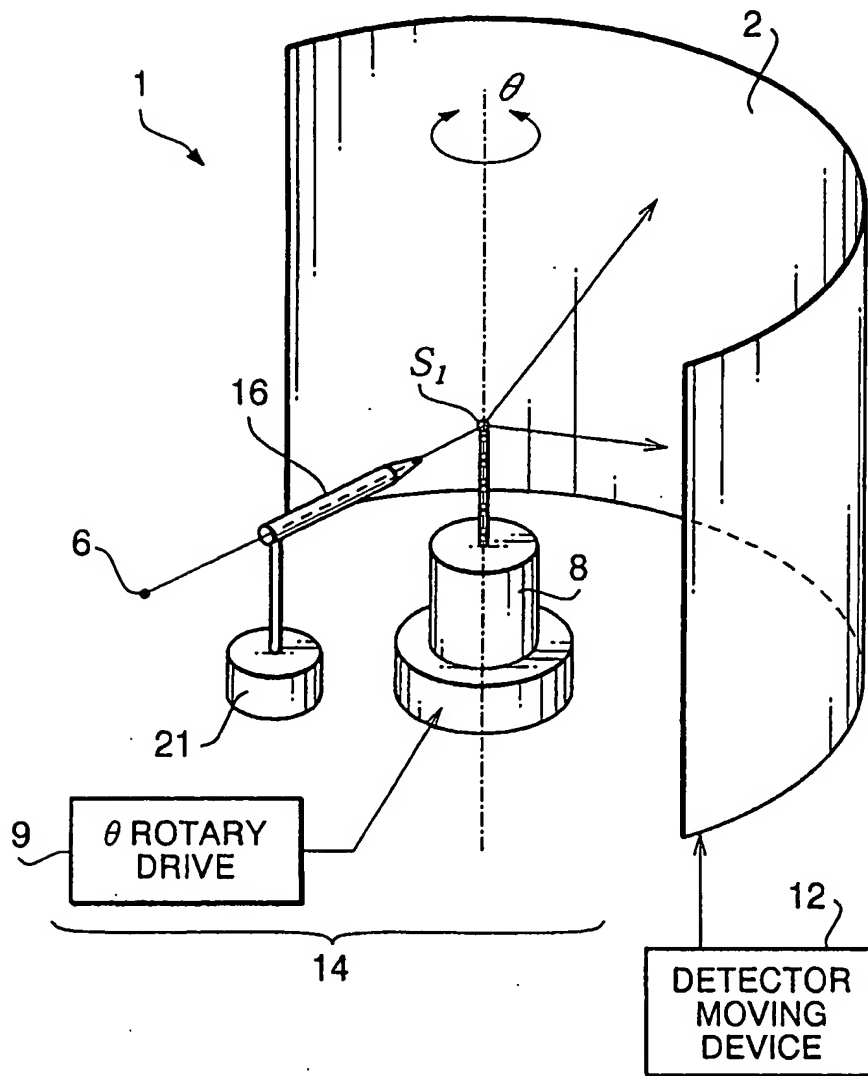


FIG. 2

Approved  
2/4/06